Oakite® Rust Preventive 1
Emulsifiable rust preventive oil for steel and non-ferrous metals.

PRIMARY APPLICATION

Oakite Rust Preventive 1 is an emulsifiable, mildly alkaline material for preventing rust on steel and protecting non-ferrous metal surfaces. It is most effective applied over conversion coatings for long term protection, and is well suited as the final step in the Oakite CrysCoat®-and-Oil process. Excellent results are obtained when Rust Preventive 1 is applied over conversion coatings such as Oakite CrysCoat XH or CrysCoat OC. Oakite Rust Preventive 1 may be applied either by dip, or brush.

CHEMICAL CHARACTERISTICS

- Chemical composition: blend of aliphatic hydrocarbons, and corrosion inhibitors
- Physical form: as received: clear, brown liquid
  as used: milk-white solution
- Odor: bland petroleum hydrocarbon
- Specific gravity: 0.94 at 15°C (60°F)
- Bulk density: 940 g/l (7.8 lb/gal)
- Viscosity: 220 — 250 cps, Brookfield Spindle 2, 60 rpm at 20°C (68°F)
- Flash point: 171°C (340°F) minimum, Open Cup (COC)
- Foaming tendency: slight
- Recommended diluent: water
- Maximum solubility: emulsifiable in water up to 20% by volume
- Behavior in hard water: see Notes on Use
- Rinsability: n/a
- Biodegradable surfactants: not applicable
- Phosphate-free: yes
- Normal working concentrations: 5 to 20% by volume with water
- Normal working temperatures: 70°F to 120°F
- pH at working concentrations: about 9 at 5% emulsion

APPLICATION PROCEDURE

Oakite Rust Preventive 1 is used in dip operations at about 5 to 20% by volume with water. Continual agitation should be provided to prevent separation of the emulsion. Temperatures will range from 70°F to 120°F. Water temperature should be 70°F to 90°F when making up a fresh bath.

Solution Control: Concentrations are titrated using Gardotest Procedure 133. (See Procedure)

EQUIPMENT

The Chemetall Oakite Chemical Metering Pump can be used to automatically maintain the make up chemical requirement of this product. If predilution is required, the Chemetall Oakite water driven Proportioners can be used to automatically feed the premixed solution of this product to the process tank. Please contact the Chemetall Oakite Process Equipment and Engineering Department for specific recommendations.
NOTES ON USE (See Material Safety Data Sheet)

If makeup water hardness exceeds 350 ppm, use of deionized water is recommended. For optimum results, pH of the emulsion should be maintained between 8.0-9.2. Triethanolamine may be added to increase pH. With all emulsion products, the stability of the emulsion is influenced by many factors such as water hardness, contamination and temperature. Minimizing contamination, using softened or similar quality water, utilizing the product at the recommended temperature and using good housekeeping practices, will help to provide the optimal performance of the product.

Safety and Handling Precautions
Oakite Rust Preventive 1 is an emulsifiable rust preventive oil. Direct contact causes eye irritation. Prolonged skin contact may cause irritation. Inhalation of oil mist is harmful. It may be harmful if swallowed. Do not get in eyes. Avoid prolonged or repeated skin contact. Wash thoroughly after handling. Avoid breathing oil mist. Do not take internally.

First Aid in Case of Contact
For eyes, flush with plenty of water for at least 15 minutes; get medical attention. For skin, wash thoroughly with mild soap and warm water. Remove contaminated clothing and shoes. Wash them before reuse. If swallowed, wash out mouth with water thoroughly, give water to drink. Consult a doctor. If inhaled, remove from exposure.

KEEP OUT OF REACH OF CHILDREN

DISPOSAL

Dispose of according to all federal, state and local regulations.

SHIPMENT

May be shipped by any common carrier. Freight classification is "Petroleum Oil, NOIBN". Product Code No: 5000.

STORAGE

Suitable for general indoor storage. Keep container closed when not in use. Keep concentrate away from heat, sparks, open flame and strong oxidants. Do not store below -18°C (0°F). Becomes more viscous at lower temperatures; restores when warmed.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of high temperature</td>
<td>none</td>
</tr>
<tr>
<td>Effect of low temperature</td>
<td>none, pour point -20°C (-5°F)</td>
</tr>
<tr>
<td>Effect of aging</td>
<td>none</td>
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</tbody>
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